Bay Area Air Quality Management District

939 Ellis Street 375 Beale Street, Suite 600 San Francisco, CA 941059 (415) 771-6000

FinalProposed

MAJOR FACILITY REVIEW PERMIT

Issued To: Graphic Packaging International, Inc. Facility #A0732

Facility Address:

2600 De La Cruz Blvd Santa Clara, CA 95050-2663

Mailing Address:

2600 De La Cruz Blvd Santa Clara, CA 95050-2663

Responsible Official

Facility Contact

Richard M. Johnston Jeff Mih, General Manager (408) 496-5118

Rick Horne, Environmental Manager (408) 496-5080

Type of Facility:

Recycled Paperboard

BAAQMD Permit Engineering Division

Contact:

Mill and Cogeneration Plant

Brenda Cabral Carol Lee

Primary SIC:

2631

Product: Recycled Paperboard & Electricity

ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Signed by Jeff McKay for Jack P. Broadbent

September 30, 2011

Jack Broadbent, Executive Officer/Air Pollution Control Officer

Date

Proposed Draft

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I. STANDARD CONDITIONS

A. Administrative Requirements

The permit holder shall comply with all applicable requirements in the following regulations:

BAAQMD Regulation 1 - General Provisions and Definitions

(as amended by the District Board on 7/8/085/4/11);

SIP Regulation 1 - General Provisions and Definitions

(as approved by EPA through 6/28/99);

BAAQMD Regulation 2, Rule 1 - Permits, General Requirements

(as amended by the District Board on $\frac{3/4}{09}$ 12/19/12,

effective 8/31/16);

SIP Regulation 2, Rule 1 - Permits, General Requirements

(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 2 - Permits, New Source Review

(as amended by the District Board on 6/15/0512/19/12,

effective 8/31/16);

SIP Regulation 2, Rule 2 - Permits, New Source Review and Prevention of Significant Deterioration

(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking

(as amended by the District Board on $\frac{12}{21}$ /04/12/19/12);

SIP Regulation 2, Rule 4 - Permits, Emissions Banking

(as approved by EPA through 1/26/99); and

BAAQMD Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants

(as adopted amended by the District Board on 6/15/0501/06/10); and

BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review

(as amended by the District Board on 4/16/03); and

SIP Regulation 2, Rule 6 – Permits, Major Facility Review

(as approved by EPA through 6/23/95).

B. Conditions to Implement Regulation 2, Rule 6, Major Facility Review

1. This Major Facility Review Permit expires on September 29, 2016was issued on and expires on [when issued, enter 5th anniversary of issue date]. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than March 29, 2016 [when issued, enter date 6 months prior to permit expiration date] and no earlier than September 29, 2015 [when issued, enter date 12 months prior to expiration date]. If a complete application for renewal has not been submitted in accordance with these deadlines, the facility may not operate after September 29, 2016 [when issued, enter 5th anniversary of issue date]. If the permit renewal has not been issued by September 29, 2016 ______, but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application. (Regulation 2-6-307, 404.2, 407, & 409.6; MOP Volume II, Part 3, §4.2)

I. Standard Conditions

2. The permit holder shall comply with all conditions of this permit. The permit consists of this document and all appendices. Any non-compliance with the terms and conditions of this permit will constitute a violation of the law and may be grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (Regulation 2-6-307; MOP Volume II, Part 3, §4.11)

- 3. In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. (MOP Volume II, Part 3, §4.11)
- 4. This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)
- 5. The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
- 6. This permit does not convey any property rights of any sort, or any exclusive privilege. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
- 7. The permit holder shall supply within 30 days any information that the District requests in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. (Regulation 1-441, Regulation 2-6-409.4 & 501; MOP Volume II, Part 3, §4.11)
- 8. Any records required to be maintained pursuant to this permit that the permittee considers to contain proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District Administrative Code. (Regulation 2-6-419; MOP Volume II, Part 3, §4.11)
- 9. Proprietary or trade secret information provided to EPA will be subject to the requirements of 40 CFR Part 2, Subpart B Public Information, Confidentiality of Business Information. (40 CFR Part 2)
- 10. The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions or the potential to emit for the time period stated and is included only as one means of determining applicable requirements for emission sources. It does not establish, or constitute a basis for establishing, any new emission limitations. (MOP Volume II, Part 3, §4.11)
- 11. The responsible official shall certify all documents submitted by the facility pursuant to the major facility review permit. The certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the

I. Standard Conditions

document are true, accurate, and complete. The certifications shall be signed by a responsible official for the facility. (<u>Regulation 2-6-409.20</u>, MOP Volume II, Part 3, §4.11)

12. The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors. (Regulation 2-6-307)

C. Requirement to Pay Fees

The permit holder shall pay annual fees in accordance with District Regulation 3, including Schedule P. (Regulation 2-6-402 & 409.13, Regulation 3; MOP Volume II, Part 3, §4.12)

D. Inspection and Entry

Access to Facility: The permit holder shall provide reasonable access to the facility and equipment that is subject to this permit to the APCO and/or to his or her designee. (Regulation 1-440, Regulation 2-6-409.3; MOP Volume II, Part 3, §4.14)

E. Records

- 1. The permit holder must provide any information, records, and reports requested or specified by the APCO. (Regulation 1-441, Regulation 2-6-409.4)
- 2. Notwithstanding the specific wording in any requirement, all records for federally enforceable requirements shall be maintained for at least five years from the date of entry. (Regulation 2-6-501; MOP Volume II, Part 3, §4.7)

F. Monitoring Reports

Reports of all required monitoring must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting. Monitoring reports shall be submitted for the following periods: February January 1st through July June 31st 30th and August July 1st through January December 31st, and are due on the last day of the month after the end of the reporting period. All instances of non-compliance shall be clearly identified in these reports. The reports shall be certified by the responsible official as true, accurate, and complete. In addition, all instances of non-compliance with the permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions. The reports shall be sent by e-mail to compliance@baaqmd.gov or postal mail to the following address:

Director of Compliance and Enforcement Bay Area Air Quality Management District 939 Ellis Street375 Beale Street, Suite 600 San Francisco, CA 941059 Attn: Title V Reports

(Regulation 2-6-502; MOP Volume II, Part 3, §4.7)

I. Standard Conditions

G. Compliance Certification

Compliance certifications shall be submitted annually by the responsible official of this facility to the Bay Area Air Quality Management District and to the Environmental Protection Agency. The certification period will be February January 1st through January December 31st. The certification shall be submitted by February 28th of each year. The certification must list each applicable requirement, the compliance status, whether compliance was continuous or intermittent, the method used to determine compliance, and any other specific information required by the permit. The permit holder may satisfy this requirement through submittal of District generated Compliance Certification forms. The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the certification should be sent by e-mail to r9.aeo@epa.gov or postal mail to the Environmental Protection Agency at the following address:

Director of the Air Division
 USEPA, Region IX
 75 Hawthorne Street
 San Francisco, CA 94105
 Attention: Air-3
 Director
Enforcement Division, TRI & Air Section (ENF-2-1)
USEPA Region 9
 75 Hawthorne Street
San Francisco, CA 94105

(MOP Volume II, Part 3, §4.5 and 4.15)

H. Emergency Provisions

- 1. The permit holder may seek relief from enforcement action in the event of a breakdown, as defined by Regulation 1-208 of the District's Rules and Regulations, by following the procedures contained in Regulations 1-431 and 1-432. The District will thereafter determine whether breakdown relief will be granted in accordance with Regulation 1-433. (MOP Volume II, Part 3, §4.8)
- 2. The permit holder may seek relief from enforcement action for a violation of any of the terms and conditions of this permit by applying to the District's Hearing Board for a variance pursuant to Health and Safety Code Section 42350. The Hearing Board will determine after notice and hearing whether variance relief should be granted in accordance with the procedures and standards set forth in Health and Safety Code Section 42350 et seq. (MOP Volume II, Part 3, §4.8)
- 3. The granting by the District of breakdown relief or the issuance by the Hearing Board of a variance will not provide relief from federal enforcement. (MOP Volume II, Part 3, §4.8)

I. Standard Conditions

I. Severability

In the event that any provision of this permit is invalidated by a court or tribunal of competent jurisdiction, or by the Administrator of the EPA, all remaining portions of the permit shall remain in full force and effect. (Regulation 2-6-409.5; MOP Volume II, Part 3, §4.10)

J. Miscellaneous Conditions

1. The maximum capacity for each source as shown in Table II-A is the maximum allowable capacity. Exceedance of the maximum allowable capacity for any source is a violation of Regulation 2, Rule 1, Section 301. (Regulation 2-1-301)

II. EQUIPMENT LIST

Table II-A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

S#	Description	Make or Type	Model	Capacity
S6	Gas Turbine, natural gas only, with Steam Injection (26 MW nominal)	General Electric	LM2500	2190 therms/hr219 MMBtu/hr
S7	Duct Burner, natural gas	Coen	C-0700-248	75 MMbtu/hr, HHV (limited to 70.2 MMbtu/hr, HHV)
S 9	Standby Boiler, with low NOx Burners and Flue Gas Recirculation, natural gas & distillate oil (cannot fire both simultaneously)	Cleaver-Brooks	W-3813	161 MMbtu/hr
S10	Papermaking including pulping, separation processes, web production, and drying	Kobayashi	Not Applicable	146,000 ton/12 month period
S11	Cold Cleaner	ZEP Dynaclean		30 gallons of volume
S12	Cold Cleaner	ZEP Dynaclean		30 gallons of volume
S13	Cold Cleaner	ZEP Dynaclean		30 gallons of volume
S14	Fire Pump Engine	1984 Fairbanks Morse		223 hp
S16	Felt Cleaning (Top Felt)	Custom		
S17	Felt Cleaning (Bottom Felt)	Custom		
S18	Felt Cleaning (1st Main Press)	Custom		
S19	Felt Cleaning (2 nd Main Press)	Custom		
<u>S20</u>	Paperboard Sealing (Dry Stack Solution Box)	Custom	Custom	
<u>S21</u>	Paperboard Sealing (Wet Stack Top Solution Box)	Custom	Custom	
<u>S22</u>	Paperboard Sealing (Wet Stack Bottom Solution Box)	Custom	Custom	
<u>S23</u>	Paperboard Coating (#1 Coater)	Custom	Custom	
<u>S24</u>	Paperboard Coating (#2 Coater)	Custom	Custom	
<u>S25</u>	Paperboard Coating (#3 Coater)	Custom	Custom	

II. Equipment List

Table II-C – Significant Sources

The following sources are exempt from the requirement to obtain an authority to construct and permit to operate, but are defined as significant sources pursuant to BAAQMD Regulation 2-6-239.

S#	Description	Make or Type	Model	Capacity
N/A	Cooling Tower			400 gpm
				34,000 cfm
S20	Paperboard Sealing (Dry Stack	Custom	Custom	
	Solution Box)			
S21	Paperboard Sealing (Wet Stack	Custom	Custom	
	Top Solution Box)			
S22	Paperboard Sealing (Wet Stack	Custom	Custom	
	Bottom Solution Box)			
S23	Paperboard Coating (#1 Coater)	Custom	Custom	
S24	Paperboard Coating (#2 Coater)	Custom	Custom	
S25	Paperboard Coating (#3 Coater)	Custom	Custom	

III. GENERALLY APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. These requirements apply in a general manner to the facility and/or to sources exempt from the requirement to obtain a District Permit to Operate. The District has determined that these requirements would not be violated under normal, routine operations, and that no additional periodic monitoring or reporting to demonstrate compliance is warranted. In cases where a requirement, in addition to being generally applicable, is also specifically applicable to one or more sources, the requirement and the source are also included in Section IV, Source-Specific Applicable Requirements, of this permit. This section also contains provisions that may apply to temporary sources.

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

- BAAQMD regulation(s):
 The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
- Any federal requirement, including a version of a District regulation that has been approved into the SIP:
 The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full language of SIP requirements is on EPA Region 9's website. The address is: http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions.

NOTE:

There are differences between current BAAQMD rules and the versions of the rules in the SIP. All sources must comply with <u>both</u> versions of a rule until US EPA has reviewed and approved (or disapproved) the <u>District's</u> revision of the regulation.

III. Generally Applicable Requirements

Table III
Generally Applicable Requirements

Applicable	Regulation Title or	Federally Enforceable
Requirement	Description of Requirement	(Y/N)
BAAQMD Regulation 1	General Provisions and Definitions (5/9/085/4/11)	N
SIP Regulation 1	General Provisions and Definitions (6/28/99)	Y
BAAQMD Regulation 2, Rule 1	General Requirements (3/4/0912/19/12, effective 8/31/16)	<u>NY</u>
BAAQMD 2-1-429	Federal Emissions Statement (12/21/04)	Y
SIP Regulation 2-1-429	Federal Emissions Statement (4/3/95)	¥
SIP Regulation 2, Rule 1	General Requirements (1/26/99)	¥
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	N
SIP Regulation 4	Air Pollution Episode Plan (8/06/90)	Y
BAAQMD Regulation 5	Open Burning (7/9/086/19/13)	N
SIP Regulation 5	Open Burning (9/4/98)	Y
BAAQMD Regulation 6, Rule 1	Particulate Matter, General Requirements (12/5/07)	N
SIP Regulation 6	Particulate Matter and Visible Emissions (9/4/98)	Y
BAAQMD Regulation 7	Odorous Substances (3/17/82)	N
BAAQMD Regulation 8, Rule 1	Organic Compounds - General Provisions (6/15/94)	Y
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/05)	N
SIP Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (3/22/95)	Y
BAAQMD Regulation 8, Rule 3	Organic Compounds - Architectural Coatings	Y
	(11/21/01 <u>7/01/09</u>)	V
SIP Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (1/2/04)	<u>Y</u> <u>Y</u>
BAAQMD Regulation 8, Rule 4	Organic compounds - General Solvent and Surface Coating Operations (10/16/02)	1
BAAQMD Regulation 8, Rule 15	Organic Compounds – Emulsified and Liquid Asphalts (6/1/94)	<u>Y</u>
BAAQMD Regulation 8, Rule 40	Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05)	N
SIP Regulation 8, Rule 40	Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (4/19/01)	Y
BAAQMD Regulation 8, Rule 47	Organic Compounds - Air Stripping and Soil Vapor Extraction Operations (6/15/05)	N
SIP Regulation 8, Rule 47	Organic Compounds - Air Stripping and Soil Vapor Extraction Operations (4/26/95)	Y
BAAQMD Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (12/20/95)	N

III. Generally Applicable Requirements

Table III Generally Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
SIP Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (3/22/95)	Y
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)	N
SIP Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (6/8/99)	Y
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/7/98)	N
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (7/11/90)	N
SIP Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (9/2/81)	Y
California Health and Safety Code Section 41750 et seq.	Portable Equipment	N
California Health and Safety Code Section 44300 et seq.	Air Toxics "Hot Spots" Information and Assessment Act of 1987	N
California Health and Safety Code Title 17, Section 93115	Airborne Toxic Control Measure for Stationary Compression Ignition Engines	N
California Health and Safety Code Title 17, Section 93116	Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater	N
40 CFR Part 61, Subpart M	National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos (6/19/95)	Y
EPA Regulation 40 CFR 82	Protection of Stratospheric Ozone (2/21/95)	
Subpart F, 40 CFR 82.156	Leak RepairRecycling and Emissions Reductions – Required Practices	Y
Subpart F, 40 CFR 82.161	Recycling and Emissions Reduction – Technician Certification of Technicians	Y
Subpart F, 40 CFR 82.166	Records of RefrigerantRecycling and Emissions Reductions – Reporting and Recordkeeping Requirements	Y

IV. SOURCE-SPECIFIC APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. The requirements cited in the following tables apply in a specific manner to the indicated source(s).

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

- 1. BAAQMD regulation(s):_The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
- 2. Any federal requirement, including a version of a District regulation that has been approved into the SIP:
 - The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full text of each permit condition cited is included in Section VI, Permit Conditions, of this permit. The full language of SIP requirements is on EPA Region 9's website. The address is: http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=B ay+Area+Air+Quality+Management+District-Agency-Wide+Provisions.All other text may be found in the regulations themselves.

Table IV-Facility
Source-Specific Applicable Requirements

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
California	Regulation for the Mandatory Reporting of Greenhouse Gas	N	
Health and	Emissions		
Safety Code			
Title 17,			
Subchapter			
10, Article 2			
§95100	Purpose	N	
§95101	Applicability	N	
§95102	Definitions	N	
§95103	General Greenhouse Gas Reporting Requirements	N	
§95104	Greenhouse Gas Emissions Data Report	N	
§95105	Document Retention and Record Keeping Requirements	N	
§95106	Confidentiality	N	
§95107	Enforcement	N	

IV. Source-Specific Applicable Requirements

Table IV-Facility Source-Specific Applicable Requirements

Applicable	Regulation Title or	Federally Enforceable	Future Effective
Requirement	Description of Requirement	(Y/N)	Date
§95108	Severability	N	
§95109	Incorporation by Reference	N	
§95112	Data Requirements and Calculation Methods for	N	
	Cogeneration Facilities		
§95115	Data Requirements and Calculation Methods for General Stationary	N	
	Combustion Facilities		
§95125	Additional Calculation Methods	N	
§95130	Requirements for Verification of Emissions Data Reports	N	
§95131	Requirements for Verification Services	N	
§95132	Accreditation Requirements for Verification Bodies, Lead Verifiers,	N	
	and Verifiers		
§95133	Conflict of Interest Requirements for Verification Bodies	N	
40 CFR Part	Mandatory Greenhouse Gas Reporting	¥	
98			
Subpart A	General Provisions		
98.1	Purpose and scope	¥	
98.2	Who must report?	¥	
98.2(a)(2)	Pulp and paper manufacturing	¥	
98.2(c)	Calculation of CO2e	¥	
98.2(i)	Duration of reporting	¥	
98.3	What are the general monitoring, reporting, recordkeeping and	¥	
	verification requirements of this part?		
98.3(a)	General	¥	
98.3(b)	Schedule	¥	
98.3(c)	Content of the annual report	¥	
98.3(d)	Special provisions for reporting year 2010	¥	
98.3(e)	Emission calculations	¥	
98.3(f)	Verification	¥	
98.3(g)	Recordkeeping	¥	
98.3(h)	Annual GHG report revisions	¥	
98.3(i)	Calibration accuracy requirements	¥	
98.4	Authorization and responsibilities of the designated representative	¥	
98.5	How is the report submitted?	¥	
98.8	What are the compliance and enforcement provisions of this part?	¥	
Subpart C	General Stationary Fuel Combustion Sources		

IV. Source-Specific Applicable Requirements

Table IV-Facility Source-Specific Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
98.30	Definition of the source category	¥	
98.31	Reporting threshold.	¥	
98.32	GHGs to report	¥	
98.33	Calculating GHG emissions	¥	
98.34	Monitoring and QA/QC requirements	¥	
98.35	Procedures for estimating missing data	¥	
98.36	Data reporting requirements	¥	
98.37	Records that must be retained	¥	

Table IV-A Source-Specific Applicable Requirements S6, Turbine; S7, Duct Burner

Applicable	Regulation Title or	Federally Enforceable	Future Effective
Requirement	Description of Requirement	(Y/N)	Date
BAAQMD	2 correspond of resignations	(2/11)	2
Regulation 1	General Provisions and Definitions (11/3/935/4/11)		
1-107	Combination of Emissions	Y	
1-520	Continuous Emission Monitoring	Y	
1-520.8	Monitors required per Reg. 2-1-403	Y	
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y	
1-522.4	reporting of inoperative CEMs	Y	
1-522.5	CEM calibration requirements	Y	
1-522.6	CEM accuracy requirements	Y	
1-522.7	emission limit exceedance reporting requirements	N	
1-522.8	monitoring data submittal requirements	Y	
1-522.9	recordkeeping requirements	Y	
1-602	Area and Continuous Emission Monitoring Requirements	N	
SIP	General Provisions and Definitions (6/28/99)		
Regulation 1			
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y [‡]	
1-522.7	Monitor excesses	Y [‡]	

Table IV-A Source-Specific Applicable Requirements S6, Turbine; S7, Duct Burner

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
BAAQMD			
Regulation 2,	Regulation 2, Rule 1 - Permits, General Requirements (6/7/95)		
Rule 1			
2-1-501	Monitors	Y	
BAAQMD	Particulate Matter, General Requirements (12/5/07)		
Regulation 6,			
Rule 1			
6-1-301	Ringelmann #1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-310.3	Particulate Weight Limitation @ 6% O2	N	
6-1-401	Appearance of Emissions	N	
SIP	Particulate Matter and Visible Emissions (9/4/98)		
Regulation 6			
6-301	Ringelmann #1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-310.3	Particulate Weight Limitation @ 6% O2	Y	
6-401	Appearance of Emissions	Y	
BAAQMD			
Regulation 9,	Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)		
Rule 1			
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
BAAQMD	Inorganic Gaseous Pollutants - Nitrogen Oxides from Stationary		
Regulation 9,	Gas Turbines (9/21/94 <u>12/6/06</u>)		
Rule 9			
9-9-113	Exemption - Inspection/Maintenance	N	
9-9-114	Exemption - Startup/Shutdown	N	
9-9-115	Limited Exemption, Minor Inspection and Maintenance Work	N	
9-9-120	Limited Exemption, Interchangeable Emission Reduction Credits	N	
9-9-301	Emission Limits – General	N	
9-9-301.1.2	Emission Limits - Turbines over 10.0 MW without SCR	Y	

Table IV-A Source-Specific Applicable Requirements S6, Turbine; S7, Duct Burner

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
9-9-301.2	Emission limits	N N	1/1/10
9-9-301.4	Rebuttable presumption	N	1/1/10
9-9-501.4		N N	
	Monitoring & Recordkeeping		
9-9-603	Continuous Emission Monitoring	N	
9-9-605	Compliance With Output Based NOx Emissions Standards	N	
SIP Regulation 9, Rule 9	Inorganic Gaseous Pollutants - Nitrogen Oxides from Stationary Gas Turbines (12/15/97)		
9-9-113	Exemption - Inspection/Maintenance	Y	
9-9-114	Exemption - Startup/Shutdown	Y	
9-9-301	Emission Limits – General	Y	
9-9-301.2	Emission Limits - Turbines over 10.0 MW without SCR	Y	
9-9-501	Monitoring & Recordkeeping	Y	
BAAQMD Manual of Procedures, Volume V	Continuous Emission Monitoring Policy and Procedures (1/20/82)	Y	
40 CFR 60	Standards of Performance for New Stationary Sources _	Y	
Subpart A	General Provisions (12/23/71)	**	
Subpart A	General Provisions	¥	
60.4(b)	Reports to EPA and District	Y	
60.7(a)(4)	Written notification of physical or operational changes	Y	
60.7(b)	Records	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
NSPS	Standards of Performance for Stationary Gas Turbines		
Subpart GG 60.332 (a)(<u>42</u>)	(1/27/8210/17/00) Performance Standard, NOx	Y	
60.333(b)	Performance Standards, SO2: percentage of S in fuel (S6, Turbine only	Y	

Table IV-A Source-Specific Applicable Requirements S6, Turbine; S7, Duct Burner

Applicable	Regulation Title or	Federally Enforceable	Future Effective
Requirement	Description of Requirement	(Y/N)	Date
60.334(b)	Use of CEM to monitor NOx	Y	Date
60.334(h)(3)	Valid purchase contract, tariff sheet, or transportation contract for	Y	
(i)	natural gas	1	
60.334(j)(iii)	4-hour average	Y	
60.335	Test Methods and Procedures	Y	
40 CFR 60,	Performance Specifications	1	
Appendix B	retrormance specimentons		
Performance	Specifications and Test Procedures for SO ₂ and NO _x Continuous	Y	
Specification	Emission Monitoring Systems in Stationary Sources	_	
2			
Performance	Specifications and Test Procedures for O ₂ and CO ₂ Continuous	Y	
Specification	Emission Monitoring Systems in Stationary Sources		
3			
40 CFR 60	Quality Assurance Procedures		
Appendix F			
Procedure 1	QA requirements for gas continuous emission monitoring systems	Y	
BAAQMD	Permit to Operate Condition	Y	
Condition			
#14522			
Part 1	Natural gas firing [BACT]	Y	
Part 4	Steam Injection to control NOx emissions during all periods of gas	Y	
	turbine operation except during times of start-up, shutdown, and		
	inspection and maintenance		
	[BAAQMD Regulation 9, Rule 9]		
Part 5	Monitoring & recordkeeping [BACT, BAAQMD Regulation 9, Rule	Y	
	9]		
Part 6	Sulfur Limit (PUC quality gas) [BAAQMD Regulation 2-1-403]	Y	
Part 7	Heat input limit for turbine [Cumulative Increase, 2-1-305, 2-2-409]	Y	
Part 8	Hourly records of turbine heat input [2-6-503]	Y	
Part 9	Heat input limit for duct burner [Cumulative Increase, 2-1-305, 2-2-	Y	
	409]		
Part 10	Hourly records of duct burner heat input [2-6-503]	Y	
Part 11	Records of fuel usage [2-6-501, 2-6-503]	Y	

Table IV-B Source-Specific Applicable Requirements S9, Standby Boiler

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
BAAQMD	Particulate Matter, General Requirements (12/5/07)		
Regulation 6,			
Rule 1			
6-1-301	Ringelmann #1 Limitation	N	
6-1-304	Tube Cleaning	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-310.3	Particulate Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP	Particulate Matter and Visible Emissions (9/4/98)		
Regulation 6			
6-301	Ringelmann #1 Limitation	Y	
6-304	Tube Cleaning	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	N	
6-310.3	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
BAAQMD			
Regulation 9,	Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)		
Rule 1			
9-1-301	Limitations on Ground Level Concentrations	<u>NY</u>	
9-1-302	General Emission Limitations	Y	
9-1-304	Fuel Burning (Liquid and Solid Fuels)	Y	
BAAQMD	Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon		
Regulation 9,	Monoxide from Industrial, Institutional, and Commercial		
Rule 7	Boilers, Steam Generators, and Process Heaters (5/4/11)		
9-7-112	Limited Exemption, Low Fuel Usage	N	
9-7-112.2	Operation at 10% capacity	N	
9-7-114	Limited Exemption, Tune-Up	N	
9-7-115	Limited Exemption, Startup and Shutdown	N	
9-7-503	Records	N	
9-7-503.2	Records of natural gas curtailment	N	
9-7-503.3	Records of equipment testing	N	

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Table IV-B Source-Specific Applicable Requirements S9, Standby Boiler

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
9-7-503.4	Source Test Records and Record Retention	N	
9-7-504	Low Fuel Usage - Monitoring and Records	N	
SIP	Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon		
Regulation 9,	Monoxide from Industrial, Institutional, and Commercial		
Rule 7	Boilers, Steam Generators, and Process Heaters (12/15/97)		
9-7-301	Emission Limits - Gaseous Fuels	Y	
9-7-301.1	Performance Standard, NOx, gaseous fuel	Y	
9-7-301.2	Performance Standard, CO, non-gaseous fuel	Y	
9-7-302	Emission Limits – Non-gaseous fuels	Y	
9-7-302.1	Performance Standard, NOx	Y	
9-7-302.2	Performance Standard, CO	Y	
9-7-303	Emission Limits - Gaseous and Non-Gaseous Fuel	Y	
9-7-305	Natural Gas Curtailment-Non-Gaseous Fuel	Y	
9-7-305.1	Natural Gas Curtailment-Non-Gaseous Fuel: NOx limit	Y	
9-7-305.2	Natural Gas Curtailment-Non-Gaseous Fuel: CO limit	Y	
9-7-306	Equipment Testing Non-Gaseous Fuel	Y	
9-7-503	Records	Y	
9-7-503.2	Records of natural gas curtailment	Y	
9-7-503.3	Records of equipment testing	Y	
9-7-503.4	Source Test Records and Record Retention	Y	
40 CFR 60	Standards of Performance for New Stationary Sources _		
Subpart A	General Provisions (12/23/71)		
Subpart A	General Provisions		
60.4(b)	Reports to EPA and District	Y	
60.7(a)(4)	Written notification of physical or operational changes	Y	
60.7(b)	Records	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	

IV. Source-Specific Applicable Requirements

Table IV-B Source-Specific Applicable Requirements S9, Standby Boiler

Applicable	Regulation Title or	Federally Enforceable	Future Effective
Requirement	Description of Requirement	(Y/N)	Date
NSPS	Standards of Performance for Industrial-Commercial-	(=1-1)	
Subpart Db	Institutional Steam Generating Units (12/16/87)		
60.42b(j)	Requirement to burn only very low sulfur oil	Y	
60.43b(f)	Opacity limit	Y	
60.43b(g)	Opacity limit does not apply during startup, shutdown, or malfunction	Y	
60.44b(k)	10% capacity factor	Y	
60.45b(j)	Fuel receipts	Y	
60.46b(a)	Opacity limit does not apply during startup, shutdown, and malfunction	Y	
60.46b(d)(7)	Opacity test	Y	
60.47b(f)	Fuel receipts	Y	
60.48b(i)	Exemption from NOx CEM for sources subject to Section 60.44b(k)	Y	
60.48b(j)(2)	Exemption from COM monitor for use of low-sulfur liquid fuel	Y	
60.49b(d)	Records of fuels combusted	Y	
60.49b(f)	Records of opacity	Y	
60.49b(j)	Reports of sulfur dioxide emissions	Y	
60.49b(o)	Record retention requirement	Y	
60.49b(p)	Records of calendar date, number of hours of operation, hourly steam load	Y	
60.49b(q)	Annual report	Y	
60.49b(q)(1)	Annual capacity factor	Y	
60.49b(r)	Maintenance of fuel oil receipts; annual report to Administrator	Y	
60.49b(w)	Reporting period-every six months	Y	
BAAQMD Cond #12231	Permit to Operate Condition		
Part 1	Only burn natural gas or distillate oil, only use distillate oil in the event of natural gas curtailment or testing, only PUC quality gas shall be used [Cumulative Increase]	Y	
Part 2 a	Operating Hour Limit Annual Heat Input limit (natural gas) [Cumulative Increase]	Y	
Part 2b	Operating Hour Limit (natural gas) [2-6-420]	¥	
Part 3	Operating Hour Limit (distillate oil) [Cumulative Increase]	Y	

Table IV-B Source-Specific Applicable Requirements S9, Standby Boiler

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Part 4	Maximum Heat Input [Cumulative Increase, 9-7-112.2]	Y	
Part 5	Natural Gas Flow Meter [Cumulative Increase]	Y	
Part 6	Flue Gas Recirculation Requirement [BACT]	Y	
Part 7	BACT NOx and CO Limit (natural gas) [BACT]	Y	
Part 8	NOx Limit (distillate oil) [BACT]	Y	
Part 9	BACT CO Limit (natural gas) [BACT]	¥	
Part 10 9	Sulfur Limit in distillate oil [BACT]	Y	
Part 11 10	PM Limit [BACT]	Y	
Part 12	Source Test Requirement [Offsets]	¥	
Part 13 11	Recordkeeping [BACT,Cumulative Increase, Regulation 2-6-5019-7-504]	Y	
Part 14	BACT review [Cumulative Increase]	¥	
Part 15	Records of fuel usage [2-6-501, 2-6-503]	¥	
<u>Part 12</u>	Annual Portable Analyzer Verification [BACT, Regulation 9-7-112.2, Regulation 2-6-503]	<u>Y</u>	

Table IV-C
Source-Specific Applicable Requirements
S10, Papermaking including pulping, separation processes, web production, and drying

Applicable	Regulation Title or	Federally Enforceable	Future Effective
Requirement	Description of Requirement	(Y/N)	Date
BAAQMD	Particulate Matter, General Requirements (12/5/07)		
Regulation 6,			
Rule 1			
6-1-301	Ringelmann #1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-310.3	Particulate Weight Limitation	N	
6-1-311	General Operations	N	

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IV. Source-Specific Applicable Requirements

Table IV-C Source-Specific Applicable Requirements S10, Papermaking including pulping, separation processes, web production, and drying

Applicable	Regulation Title or	Federally Enforceable	Future Effective
Requirement	Description of Requirement	(Y/N)	Date
6-1-401	Appearance of Emissions	N	Date
SIP	Particulate Matter and Visible Emissions (9/4/98)	11	
Regulation 6	1 at tenate Watter and Visible Emissions (7/4/76)		
6-301	Dincolmonn #1 Limitation	Y	
	Ringelmann #1 Limitation		
6-305	Visible Particles	Y	
6-310.3	Particulate Weight Limitation	Y	
6-311	General Operations	Y	
6-401	Appearance of Emissions	Y	
BAAQMD	Organic Compounds - Miscellaneous Operation (3/22/957/20/05)	Y	
Regulation 8,			
Rule 2	(Applies to pulping and drying operations only)		
8-2-301	Miscellaneous Operations (pulping and drying operations)	Y	
BAAQMD			
Regulation 9,	Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)		
Rule 1			
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
BAAQMD	Permit to Operate Condition		
Cond #13344			
Part 1	Throughput Limit [2-1-301, 2-1-234.3.1.2]	Y	
Part 2	Recordkeeping [2-1-301, 2-1-234.3.1.2]	Y	

Table IV - D
Source-specific Applicable Requirements
S11, S12, S13, COLD CLEANERS

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
BAAQMD	Solvent Cleaning Operations (10/16/02)	Y	
Regulation 8,			
Rule 16			
8-16-303	Cold Cleaner Requirements	Y	
8-16-303.1	General Operating Requirements	Y	
8-16-303.2	Cold Cleaner Operating Requirements	Y	
8-16-303.3	Cold Cleaner General Equipment Requirements	Y	
8-16-303.5	Requirements for solvents	Y	
8-16-303.5.2	Use of cyclic methylated siloxanes	Y	
8-16-501	Solvent records	Y	
8-16-501.2	Monthly records	Y	
8-16-501.5	Record retention for 24 months	Y	
BAAQMD			
Condition			
#16714			
Part 1	Throughput limit (Cumulative Increase)	Y	
Part 2	Recordkeeping (Cumulative Increase)	Y	

Table IV - E Source-specific Applicable Requirements S14, FIRE PUMP ENGINE

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
BAAQMD	Particulate Matter, General Requirements (12/5/07)		
Regulation 6,			
Rule 1			
6-1-303	Ringelmann Number 2 Limitation	N	
6-1-303.1	Ringelmann Number 2 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	

Table IV - E Source-specific Applicable Requirements S14, FIRE PUMP ENGINE

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
6-1-401	Appearance of Emissions	N	
SIP	Particulate Matter and Visible Emissions (9/4/98)		
Regulation 6			
6-303	Ringelmann Number 2 Limitation	Y	
6-303.1	Ringelmann Number 2 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
BAAQMD	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)		
Regulation 9,			
Rule 1			
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-304	Liquid and Solid Fuels	Y	
BAAQMD	Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon		
Regulation 9,	Monoxide from Stationary Internal Combustion Engines (7/25/07)		
Rule 8			
9-8-110	Exemptions	N	
9-8-110.5	Emergency Standby Engines	N	
9-8-330	Emergency Standby Engines, Hours of Operation	N	
9-8-502	Recordkeeping	N	
9-8-502.1	Monthly records of usage	N	
9-8-530	Emergency Standby and Low Usage Engines, Monitoring and	N	
	Recordkeeping		
9-8-110.1	Engines less than 250 bhp horsepower	Y	
9-8-110.2	Engines fired exclusively by liquid fuels	Y	
40 CFR 63	National Emission Standards for Hazardous Air Pollutants for		
Subpart A	Source Categories (3/16/1994)		
<u>63.1</u>	Applicability	<u>Y</u>	
63.2	<u>Definitions</u>	<u>Y</u>	
63.3	Units and abbreviations	<u>Y</u>	
<u>63.4</u>	Prohibited activities and circumvention	<u>Y</u>	
<u>63.5</u>	Construction and reconstruction	<u>Y</u>	
<u>63.6</u>	Compliance with standards and maintenance requirements	<u>Y</u>	
<u>63.7</u>	Performance testing requirements	<u>Y</u>	

Table IV - E Source-specific Applicable Requirements S14, FIRE PUMP ENGINE

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
<u>63.8</u>	Monitoring requirements	<u>Y</u>	
<u>63.9</u>	Notification requirements	<u>Y</u>	
<u>63.10</u>	Recordkeeping and reporting requirements	<u>Y</u>	
<u>63.12</u>	State authority and delegations	<u>Y</u>	
<u>63.13</u>	Addresses of EPA Regional Offices	<u>Y</u>	
<u>63.14</u>	Incorporation by Reference	<u>Y</u>	
<u>63.15</u>	Availability of Information and confidentiality	<u>Y</u>	
40 CFR 63	National Emission Standards for Hazardous Air Pollutants for		
<u>Subpart</u>	Stationary Reciprocating Internal Combustion Engines		
ZZZZ			
<u>63.6585</u>	Applicability	<u>Y</u>	
63.6585(a)	Applicable to stationary RICE	<u>Y</u>	
63.6585(c)	Applicable to area source of HAPs	<u>Y</u>	
63.6590	Subject to subpart ZZZZ	<u>Y</u>	
63.6590(a)(1)	Existing stationary RICE at an area source of HAPs	<u>Y</u>	
(iii)			
63.6595	Compliance Schedule to 40 CFR 63, Subpart ZZZZ	<u>Y</u>	
63.6595(a)(1)	Comply with the applicable emission limitation and operating	<u>Y</u>	
	limitations no later than May 3, 2013		
63.6603	Emission Limitations and Operating Limitations for Existing Stationary	<u>Y</u>	
	RICE located at an area source of HAP emissions		
63.6603(a),	Change oil and filter every 500 hours of operation or annually.	<u>Y</u>	
Table 2d, part	whichever comes first; Inspect air cleaner every 1,000 hours of		
<u>4</u>	operation or annually, whichever comes first; and Inspect all hoses and		
	belts every 500 hours of operation or annually, whichever comes first,		
	and replace as necessary.		
<u>63.6605</u>	General Requirements	<u>Y</u>	
63.6605(a)	Comply with the emission limitations and operating limitations at all	<u>Y</u>	
	<u>times</u>		
63.6605(b)	Safety and good air pollution control practices for minimizing emissions	<u>Y</u>	
<u>63.6625</u>	Monitoring, Installation, Operation, and Maintenance Requirements	<u>Y</u>	
63.6625(e)(3)	Operate and maintain engine and after-treatment control device (if any)	<u>Y</u>	
	in a manner consistent with good air pollution control practice for		
	minimizing emissions		

Table IV - E Source-specific Applicable Requirements S14, FIRE PUMP ENGINE

Applicable	Regulation Title or	Federally Enforceable	Future Effective
Requirement	Description of Requirement	(Y/N)	Date
63.6625(f)	Install a non-resettable hour meter if one is not already installed	<u>Y</u>	
63.6625(h)	Minimize the engine's time spent at idle during startup and minimize	<u>Y</u>	
	the engine's startup time to a period needed for appropriate and safe		
	loading of the engine, not to exceed 30 minutes		
63.6635	Monitor and Collect Data to Demonstrate Continuous Compliance	<u>Y</u>	
63.6640	Demonstrate Continuous Compliance with the Emission Limitations	<u>Y</u>	
	and Operating Limitations		
63.6640(f)(1)	Requirements for an existing emergency stationary RICE located at an	<u>Y</u>	
	area source of HAP emissions.		
63.6645	Notification, Reports, and Records	<u>Y</u>	
63.6645(a)(2)	<u>Submit notification in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6),</u>	<u>Y</u>	
	63.9(b) through (e), and (g) and (h) that apply		
63.6655	Recordkeeping	<u>Y</u>	
63.6655(a)	Recordkeeping with the emission and operating limitations	<u>Y</u>	
63.6655(e)(2)	Keep records of the maintenance conducted on an existing emergency	$\underline{\mathbf{Y}}$	
	RICE		
<u>63.6660</u>	Recordkeeping	<u>Y</u>	
CCR, Title	ATCM for Stationary Compression Ignition Engines		
17, Section			
93115			
93115.5	Fuel Requirements	N	
93115.6	ATCM for Stationary CI Engines – Emergency Standby Diesel-Fueled	N	
	CI Engine (>50 bhp) Operating Requirements and Emission Standards		
93115.6(b)	In-Use Emergency Standby Diesel-Fueled CI Engine (> 50 bhp)	N	
	Operating Requirements and Emission Standards		
93115.6(b)(2)	Operation near schools	N	
93115.10(e) (1)	Monitoring Equipment	N	
93115.10(g)	Reporting Requirements for Emergency Standby Engines	N	
93115.10(g) 93115.11	ATCM for Stationary CI Engines – Compliance Schedule for Owners or	N N	
73113.11	Operators of Three or Fewer Engines (>50 bhp) Located within a	1N	
	District		
93115.11(a)	Compliance by 1/1/06 for engines complying by reducing hours of	N	
(. / . / . / . / . / .	operation	- '	

Table IV - E Source-specific Applicable Requirements S14, FIRE PUMP ENGINE

Applicable	Regulation Title or	Federally Enforceable	Future Effective
Requirement	Description of Requirement	(Y/N)	Date
93115.15	Severability	N	
BAAQMD			
Condition			
22851			
Part 1	Operation for reliability-related activities	N	
Part 2	Operation for emergencies	N	
Part 3	Non-resettable totalizing meter	N	
Part 4	Records	N	
Part 5	At School and Near-School Operation	N	

Table IV-F Source-Specific Applicable Requirements S16, Felt Cleaning (Top Felt) S17, Felt Cleaning (Bottom Felt) S18, Felt Cleaning (1st Main Press) S19, Felt Cleaning (2nd Main Press)

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
BAAQMD	Organic Compounds - General Solvent and Surface Coating		
Regulation 8,	Operations (10/16/02)		
Rule 4	(Applies to felt cleaning operation)		
8-4-302	Solvents and Surface Coating Requirements	Y	
8-4-302.1	VOC less than 5 tons/yr (Note: Limit applies to each source	Y	
	separately)		
8-4-312	Solvent Evaporative Loss Minimization	Y	
8-4-312.3	Closed containers of solvent	Y	
8-4-501	Recordkeeping Requirements	Y	
8-4-501.1	Current list of solvents in use	Y	
8-4-501.4	Monthly records of solvents	Y	
8-4-501.5	Record retention requirement	Y	

Table IV-G

Source-Specific Applicable Requirements
S20, Paperboard Sealing (Dry Stack Solution Box)

S21, Paperboard Sealing (Wet Stack Top Solution Box)

S22, Paperboard Sealing (Wet Stack Bottom Solution Box)

S23, Paperboard Coating (#1 Coater)

S24, Paperboard Coating (#2 Coater)

S25, Paperboard Coating (#3 Coater)

		Federally	Future
Applicable	Regulation Title or	Enforceable	Effective
Requirement	Description of Requirement	(Y/N)	Date
BAAQMD	Organic Compounds - Paper, Fabric, and Film Coating		
Regulation 8,	(12/20/95)		
Rule 12	(Applies to paper coating operation)		
8-12-301	Limitations, Coating Lines	Y	
8-12-301.1	Low Solvent Coating or Adhesive	Y	
8-12-302	Storage and Mixing Operations	Y	
8-12-305	Surface Preparation and Cleanup Solvent	Y	
8-12-501	Coating Records	Y	
8-12-501.1	List of Coatings and Adhesives	Y	
8-12-501.2	Daily Records	Y	
8-12-501.4	Record Retention Requirement	Y	
BAAQMD			
Cond #13344			
Part 1	Throughput Limit [2-1-301, 2-1-234.3.1.2]	¥	
Part 2	Recordkeeping [2-1-301, 2-1-234.3.1.2]	¥	

V. SCHEDULE OF COMPLIANCE

The permit holder shall comply with all applicable requirements cited in this permit. The permit holder shall also comply with applicable requirements that become effective during the term of this permit on a timely basis.

VI. PERMIT CONDITIONS

Any condition that is preceded by an asterisk is not federally enforceable.

Condition # 12231 Source: S9 Standby Boiler

- 1. This boiler shall burn only natural gas or distillate oil. Distillate oil shall be fired only in the event of a natural gas curtailment or shutdown or periodic testing. All natural gas burned at source S9, Standby Boiler, shall be PUC quality gas.[basis: cumulative increase]
- 2a. This boiler shall not exceed 1,000 hours of firing on natural gas in any consecutive 12 month period. [basis: cumulative increase]
- 2b. This boiler shall not exceed 875 hours of firing on natural gas in any consecutive 12-month period. [basis: 2-6-420]
- 3. This boiler shall not exceed 100 hours of firing on distillate oil in any consecutive 12-month period. [basis: cumulative increase]
- 4. Heat input to this boiler shall not exceed 161 MMbtu/hr. [basis: cumulative increase]
- 5. A natural gas meter dedicated solely to monitor the flow of natural gas into this boiler shall be installed and maintained. [basis: cumulative increase]
- 6. The boiler shall not be operated unless the flue gas recirculation fan is in operation. [basis: BACT]
- 7. NOx emissions during natural gas firing shall not exceed 25 ppmv @ 3% O2 (dry basis). [basis: BACT]

VI. Permit Conditions

8. NOx emissions during distillate oil firing shall not exceed 60 ppmv @ 3% O2 (dry basis). [basis: BACT]

- 9. CO emissions during natural gas firing shall not exceed 50 ppmv @ 3% O2 (dry basis). [basis: BACT]
- 10. Sulfur content in the distillate oil shall not exceed 0.05% by weight. [basis: BACT, Cumulative Increase]
- 11. Visible particulate emissions shall not exceed Ringelmann No. 0.5. [basis: BACT]
- 12. The owner/operator shall determine compliance with the following NOx and CO limits by using a portable analyzer and U.S. EPA Method CTM-030 on an annual basis. The owner/operator shall use the method during natural gas firing. Use of the method during fuel oil firing is not required. Source testing that is performed by the District's Source Test group, if available, may be used to fulfill this requirement. The owner/operator shall submit the NOx and CO compliance data to the Director of Enforcement and Compliance within 60 days of using the protocol.
 - a. NOx limit in part 7 of this condition
 - b. CO limit in part 9 of this condition
 - c. NOx and CO limits in BAAQMD Regulation 9-7-112.

[BACT, BAAQMD Regulation 2-6-503]

- 13. A District approved logbook shall be maintained of the hours of operation of this boiler, type of fuel fired and for what periods, and if distillate oil is fired, PG&E verification of natural gas curtailment. Records shall be maintained for a period of at least five years from the date of entry and made readily available to District staff upon request. [basis: BACT, BAAQMD Regulation 2-6-501]
- 14. Any future modification to this boiler to increase hours of operation, type of fuel, or for any other reason that results in increased emissions, will subject this boiler to review as though it were a new source. This includes, but is not limited to, a new BACT review. In addition, should a future modification require installation of additional abatement equipment, District staff will not support any request for a Hearing Board variance. [basis: cumulative increase]
- 15. Within 6 months of issuance of the renewed Major Facility Review permit, the owner/operator shall record fuel usage on an hourly basis. The fuel usage data shall be made available to the District upon request. [basis: 2-6-501, 2-6-503]
- 1. The owner/operator of S-9 shall operate this source on natural gas fuel exclusively, except that fuel oil may be used in the event of a natural gas curtailment or for periodic testing. (basis: Cumulative Increase)

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- 2. The owner/operator of S-9 shall not exceed 140,875 MMBTU in any consecutive twelve-month period while firing on natural gas. (basis: Cumulative Increase)
- 3. The owner/operator of S-9 shall not operate more than 100 hours while firing on fuel oil in any consecutive twelve-month period and only during times of natural gas curtailment or for periodic testing. (basis: Cumulative Increase)
- 4. The owner/operator of S-9 shall not exceed a heat input of 161 MMBTU in any hour while operating S-9. (basis: Cumulative Increase)
- 5. The owner/operator of S-9 shall maintain a natural gas meter to monitor the flow of natural gas. (basis: Cumulative Increase)
- 6. The owner/operator of S-9 shall maintain and operate the fuel gas recirculation fan whenever S-9 is in operation. (basis: BACT)
- 7. The owner/operator of S-9 shall not exceed the following limits when using natural gas as a fuel:

NOx = 25 ppm @ 3% O2

CO = 50 ppm @ 3% O2

(basis: BACT)

8. The owner/operator of S-9 shall not exceed the following limit when using fuel oil as a fuel:

NOx = 60 ppm @ 3% O2

(basis: BACT)

- 9. The owner/operator of S-9 shall not use any fuel oil with sulfur content exceeding 0.05wt%. (basis: Cumulative Increase)
- 10. The owner/operator of S-9 shall not exceed visible particulate emissions of Ringelmann No. 0.5. (basis: BACT)
- 11. To determine compliance with the above parts, the owner/operator of S-9 shall maintain the following monthly records in a District approved log:
 - a. Natural gas usage in cubic feet.
 - b. Fuel oil hourly usage and consumption in hours and gallons.
 - c. Natural gas heat content information from natural gas supplier (PG&E) in therms/cubic feet.
 - d. Monthly calculated natural gas heat input in MMBTU (Part 11a multiplied by Part 11c divided by 10).
 - e. Consecutive 12-month total of calculated natural gas heat input in MMBTU.

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f. If fuel oil is fired, natural gas supplier verification of natural gas curtailment or record of fuel oil testing.

g. If fuel oil is fired, certification of fuel sulfur content.

These records and natural gas supplier provided data shall be kept for at least 5 years from the date of entry and shall be made available to the District upon request. (basis: Cumulative Increase; Regulation 9-7-504)

- 12. The owner/operator shall determine compliance with the following NOx and CO limits by using a portable analyzer and U.S. EPA Method CTM-030 on an annual basis. The owner/operator shall use the method during natural gas firing. Use of the method during fuel oil firing is not required. Source testing that is performed by the District's Source Test group, if available, may be used to fulfill this requirement. The owner/operator shall submit the NOx and CO compliance data to the Director of Enforcement and Compliance within 60 days of using the protocol.
 - a. NOx and CO limits in part 7 of this condition
 - b. NOx and CO limits in BAAQMD Regulation 9-7-112.

[BACT, Regulation 9-7-112.2, BAAQMD Regulation 2-6-503]

Condition # 13344

S10: Papermaking including pulping, separation processes, web production, and drying

- 1. The owner/operator shall ensure that the pPaperboard throughput at S-10 shall not exceed 146,000 tons of paperboard in any consecutive 12-month period. [basis: 2-1-301, 2-1-234.3.1.2]
- 2. The owner/operator shall ensure that rRecords shall be maintained in a District approved logbook of the amount of paperboard throughput on a monthly basis. Records shall be maintained for a period of at least five years from the date of entry and made readily available to District staff upon request. [basis: 2-1-301, 2-1-234.3.1.2]

Condition #14522

Sources S6, S7 - Turbine & Duct Burner

- 1. S6, Gas Turbine, and S7, Duct Burner, shall be fired only on natural gas. [basis: BACT]
- 2. Deleted 6/18/01
- 3. Deleted 7/2/01
- 4. The owner/operator shall not operate the turbine unless the steam injection system to

VI. Permit Conditions

control NOx emissions from S6 Turbine is in operation, except during times of startup and shutdown pursuant to Regulation 9-9-114. The start-up period may be followed by a commissioning period of no more than 4 hours, during which the steam injection system is not required, if one or more of the following activities were conducted during the shutdown:

Replacement of more than 1/3 of the duct burners

Replacement of steam injection parts

Replacement of gas compressor parts

Computer control system upgrades

Gas turbine fuel nozzle replacement

The commissioning period shall end when the steam injection system is in operation and the turbine is in compliance with Regulation 9-9-305. The turbine shall be operated in low-fire mode during the commissioning period. The steam injection rate shall be controlled by the gas turbine control system at all times during the operation of the steam injection system. [basis: BAAQMD Regulation 9, Rule 9]

- 5. JSC shall install, calibrate and operate District-approved continuous monitors and recorders for oxides of nitrogen and either oxygen or carbon dioxide as required by District Regulation 10. These monitoring records shall be supplied to the Director of the Compliance and Enforcement Division upon request. [basis: BACT, Regulation 9, Rule 9]
- 6. All natural gas burned at S6, Gas Turbine, and S7, Duct Burner, shall be PUC quality gas. [basis: BAAQMD Regulation 2, Rule 1, Section 403]
- 7. The owner/operator shall ensure that the heat input to S6, Gas Turbine, does not exceed 2190 therms/hr. [Cumulative Increase, 2-1-305, 2-2-409]
- 8. The owner/operator shall maintain records of the heat input at S6 and make them available to District staff upon request. Records shall be maintained for a period of at least five years from the date of entry. [2-6-503]
- 9. The owner/operator shall ensure that the heat input to S7, Duct Burner, does not exceed 1684.8 MMbtu/day (HHV). [Cumulative Increase, 2-1-234, 2-1-305, 2-2-409]
- 10. The owner/operator shall maintain records of the daily heat input at S7 and make them available to District staff upon request. Records shall be maintained for a period of at least five years from the date of entry. [2-6-503]
- 11. Within 6 months of issuance of the renewed Major Facility Review permit, the owner/operator shall record fuel usage for S6 and S7 on an hourly basis. The owner/operator shall record S6 and S7 separately. The fuel usage data shall be made available to the District upon request. [basis: 2-6-501, 2-6-503]

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COND# 16714	
S11, S12, and S13,	Cold Cleaners

- 1. Net usage of methylated siloxane at S11, S12, and S13 shall not exceed 20 gallons per source, in any consecutive 12-month period. (basis: Cumulative Increase)
- 2. To determine compliance with the above conditions, the Permit Holder shall maintain monthly usage records of methylated siloxane. All records shall be retained on- site for five years, from the date of entry, and made available for inspection by District staff upon request. These requirements shall not replace the recordkeeping requirements contained in any applicable District regulations. (basis: Cumulative Increase)

Condition #22851 S14, Fire Pump Engine

1. Operating for reliability-related activities is limited to no more than 34 hours per year per engine which is the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25. This emergency fire pump is subject to the current National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems."

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations]

2. The owner or operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, state or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, state or Federal emission limits is not limited.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(B)(3)]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection(e)(4)(G)(1)]

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- 4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.
 - a. Hours of operation for reliability-related activities (maintenance and testing).
 - b. Hours of operation for emission testing to show compliance with emission limits.
 - c. Hours of operation (emergency).
 - d. For each emergency, the nature of the emergency condition.
 - e. Fuel usage for each engine(s).

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(I), (or, Regulation 2-6-501)]

- 5. At School and Near-School Operation:
 - If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:
 - The owner or operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
 - a. Whenever there is a school sponsored activity (if the engine is located on school grounds)
 - b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session. "School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(1)] or (e)(2)(B)(2)]

VII. APPLICABLE EMISSION LIMITS & COMPLIANCE MONITORING REQUIREMENTS

This section has been included only to summarize the applicable emission limits contained in Section IV, Source-Specific Applicable Requirements, of this permit. The following tables show the relationship between each emission limit and the associated compliance monitoring provisions, if any. The monitoring frequency column indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown, using the following codes: annual (A), quarterly (Q), monthly (M), daily (D), or on an event basis (E). No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring, and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.

This section is only a summary of the limits and monitoring requirements. In the case of a conflict with any requirement in Sections I-VI, the preceding sections take precedence over Section VII.

Table VII-A
Applicable Limits and Compliance Monitoring Requirements
S6, Turbine, S7, Duct Burner

Type of	Citation of	FE	Future Effective		Monitoring Requirement	Monitoring Frequency	Monitoring
Limit	Limit	Y/N	Date	Limit	Citation	(P/C/N)	Type
NOx	BAAQMD	N		17.2 ppmv	BAAQMD	С	CEM
	9-9-301.1.2			@15% O ₂ (dry), 3-	9-9-501		
	and 9-9-401			hour average except			
				during startup, not to			
				exceed 3 hours, and			
				shutdown, not to			
				exceed 1 hour and			
				inspection and			
				maintenance periods as			
				allowed by BAAQMD			
				9-9-113 and 9-9-115			

Table VII-A
Applicable Limits and Compliance Monitoring Requirements
S6, Turbine, S7, Duct Burner

			Future		Monitoring	Monitoring	
Type of	Citation of	FE	Effective		Requirement	Frequency	Monitoring
Limit	Limit	Y/N	Date	Limit	Citation	(P/C/N)	Type
NOx	BAAQMD	N	1/1/10	15 ppmv or 0.7	BAAQMD	С	CEM
	9-9-301.2			lb/MWhr	9-9-501		
				@15% O ₂ (dry), 3-			
				hour average except			
				during startup, not to			
				exceed 3 hours, and			
				shutdown, not to			
				exceed 1 hour and			
				inspection and			
				maintenance periods as			
				allowed by BAAQMD			
				9-9-113 and 9-9-115			
NOx	SIP	Y		17 ppmv	BAAQMD	С	CEM
	9-9-301.2			@15% O ₂ (dry), 3-	9-9-501		
	and 9-9-401			hour average except			
				during startup, not to			
				exceed 3 hours, and			
				shutdown, not to			
				exceed 1 hour and			
				inspection and			
				maintenance periods as			
				allowed by BAAQMD			
				9-9-113			
	40 CFR	Y		122 ppmv @15% O2,	40 CFR	С	CEM
	60.332(a)(2)			dry, 4-hour average	60.334(b);		
				except during startup,			
				shutdown, and			
902	D 4 4 63 57			malfunction			
SO2	BAAQMD	N		GLC ¹ of 0.5 ppm for 3		N	
	9-1-301			min or 0.25 ppm for 60			
				min or 0.05 ppm for 24			
002	DA A OME	37		hours		N.T.	
SO2	BAAQMD	Y		300 ppm (dry)		N	
	9-1-302						

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A
Applicable Limits and Compliance Monitoring Requirements
S6, Turbine, S7, Duct Burner

Type of	Citation of	FE	Future Effective		Monitoring Requirement	Monitoring Frequency	Monitoring
Limit	Limit	Y/N	Date	Limit	Citation	(P/C/N)	Type
SO2	40 CFR	Y		Fuel sulfur content of	40 CFR	N	
	60.333(b)			0.8 percent by weight	60.334(h)(3)		
				(applies to turbine			
				only)			
Opacity	BAAQMD	N		Ringelmann No. 1 for		N	
	6-1-301			less than 3 min/hr			
Opacity	SIP 6-301	Y		Ringelmann No. 1 for		N	
				less than 3 min/hr			
FP	BAAQMD	N		0.15 grain/dscf	None	N	
	6- <u>1-</u> 310						
FP	SIP 6-310	Y		0.15 grain/dscf	None	N	
FP	BAAQMD	N		0.15 grain/dscf	None	N	
	6- <u>1-</u> 310.3			@ 6% O2			
FP	SIP 6-310.3	Y		0.15 grain/dscf	None	N	
				@ 6% O2			
Heat input	BAAQMD	Y		2190 therms/hr	BAAQMD	P/H	
	Cond			(applies to turbine	Cond #14522,		
	#14522, part			only)	part 7		
	7						
Heat input				1684.8 MMbtu/day	BAAQMD	P/D	
				(HHV) applies to duct	Cond #14522,		
				burner only)	part 7		

Table VII-B
Applicable Limits and Compliance Monitoring Requirements
S9 Standby Boiler

Type of	T	EE	Future		Monitoring	Monitoring	Maritania
Limit	Limit of Citation	FE Y/N	Effective Date	Limit	Requirement Citation	Frequency (P/C/N)	Monitoring Type
NOX	9-7-112.2	N	1/1/2012	30 ppmv dry @ 3% O2	BAAQMD	P/A	Portable
11021	<i>y</i> , 112.2	11	1,1,2012	30 ppint, any 0 370 02	Cond #12231	1/11	analyzer
					Part 12		
	SIP	Y		30 ppmv dry @ 3% O2	BAAQMD	P/A	Portable
	9-7-301.1			when firing gaseous	Cond #12231		analyzer
				fuel	Part 12		
	SIP	Y		40 ppmv dry @ 3% O2		N	
	9-7-302.1			when firing non-			
				gaseous fuel			
NOx	SIP	Y		150 ppmv @3%O2,		N	
	9-7-305.1			dry when firing non-			
				gaseous fuel during			
				natural gas curtailment			
	SIP	Y		150 ppmv @3%O2,		N	
	9-7-306.1			dry when firing non-			
				gaseous fuel during			
				testing			
	BAAQMD	Y		25 ppmv dry @ 3% O2	BAAQMD	P/A	Portable
	Cond			during natural gas	Cond #12231		analyzer
	#12231			firing	Part 12		
	Part 7						
NOX	BAAQMD	Y		60 ppmv dry @ 3% O2		N	
	Cond			when firing distillate			
	#12231			oil			
	Part 8						
CO	SIP	Y		400 ppmv dry @ 3%	BAAQMD	P/A	Portable
	9-7-301.2			O2 when firing gaseous	Cond #12231		analyzer
				fuel	Part 12		
CO	SIP	Y		400 ppmv @3% O ₂ ,		N	
	9-7-305.2			dry when firing non-			
				gaseous fuel during a			
				natural gas curtailment			

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-B Applicable Limits and Compliance Monitoring Requirements S9 Standby Boiler

			Future		Monitoring	Monitoring	
Type of	Limit of	FE	Effective		Requirement	Frequency	Monitoring
Limit	Citation	Y/N	Date	Limit	Citation	(P/C/N)	Туре
	SIP	Y		400 ppmv @3% O ₂ ,		N	
	9-7-306.2			dry, when testing with			
				non-gaseous fuel			
	BAAQMD	N		400 ppmv dry @ 3%	BAAQMD	P/A	Portable
	9-7-112.2			O2	Cond #12231		analyzer
					Part 12		
	BAAQMD	Y		50 ppmv dry @ 3% O2	BAAQMD	P/A	Portable
	Cond			during natural gas	Cond #12231		analyzer
	#12231			firing	Part 12		
	Part <u>97</u>						
SO2	BAAQMD	Y		GLC ¹ of 0.5 ppm for 3		N	
	9-1-301			min or 0.25 ppm for 60			
				min or 0.05 ppm for 24			
				hours			
	BAAQMD	Y		300 ppm (dry)		N	
	9-1-302						
SO2	BAAQMD	Y		Sulfur content of fuel	BAAQMD	P/E	Records of
	9-1-304			<0.5% by weight	Cond #12231,		fuel receipts
					Part <u>1311g</u>		
	BAAQMD	Y		Sulfur content of	BAAQMD	P/E	Records of
	Cond			distillate <0.05% by	Cond #12231,		fuel receipts
	#12231			weight	Part-13 <u>11g</u>		
	Part 10						
	40 CFR	Y		S < 0.5 wt%, 24 hour	40 CFR	P/E	Records of
	60.42b(d)			average when burning	60.46b(d),		fuel receipts
				oil; limit applies at all	60.47b(f), &		
				times when burning	60.®(r)		
				fuel oil			
Opacity	BAAQMD	N		Ringelmann No. 1 for		N	
	6-1-301			less than 3 min/hr			
Opacity	SIP	Y		Ringelmann No. 1 for		N	
	6-301			less than 3 min/hr			

Table VII-B Applicable Limits and Compliance Monitoring Requirements S9 Standby Boiler

Type of Limit	Limit of Citation	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD	N		Ringelmann No. 2 for		N	V 1
opuetty	6-1-304	- 1		less than 3 min/hr		-,	
				during tube cleaning			
	SIP	Y		Ringelmann No. 2 for		N	
	6-1-304	•		less than 3 min/hr		11	
	0 1 0 0 .			during tube cleaning			
	BAAQMD	Y		Ringelmann No. 0.5		N	
	Cond	•		Tingemain 110. 0.5		11	
	#12231						
	Part 11						
	40 CFR	Y		Opacity < 20%, 6-min		N	
	60.43b(f)			average, except for one			
	,			6-min period/hr at <			
				27%; limit does not			
				apply during startup,			
				shutdown or			
				malfunction			
FP	BAAQMD	N		0.15 grain/dscf		N	
	6- <u>1-</u> 310.3			@ 6% O2			
FP	SIP	Y		0.15 grain/dscf		N	
	6- <u>1-</u> 310.3			@ 6% O2			
Hours of	BAAQMD	Y		1000 hours 140,875	BAAQMD	P/ E <u>M</u>	records
operation	Cond			MMBTU or less per	Cond #12231,		
<u>Annual</u>	#12231			year consecutive	Part 13 11		
<u>Heat</u>	Part 2 a			twelve-month of			
<u>Input</u>				operation with natural			
				gas			
Hours of	BAAQMD	¥		875 hours or less per	BAAQMD	P/E	records
operation	Cond			year of operation with	Cond #12231,		
	#12231			natural gas	Part 13		
	Part 2b						

Table VII-B Applicable Limits and Compliance Monitoring Requirements S9 Standby Boiler

Type of Limit	Limit of Citation	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Hours of	BAAQMD	Y		100 hours or less per	BAAQMD	P/E	records
operation	Cond	-		year of operation with	Cond #12231,	1,2	
.1	#12231			distillate oil	Part 13 11		
	Part 3			GISTING OIL	1 410 10 11		
Heat input	BAAQMD	Y		Heat input less than	BAAQMD	С	gas meter
•	Cond			161 MMbtu/hr	Cond #12231,		C
	#12231				Part 13 11		
	Part 10				_		
Heat input	BAAQMD	N	1/1/2012	<10% of annual	BAAQMD	С	Totalizing
	9-7-112.2			maximum heat	9-7-504		fuel meter,
				capacity per			records
				consecutive 12-month			
				period (eq. to 141,197			
				MMbtu/yr)			
Heat input	40 CFR	Y		<10% of annual	BAAQMD	P/M	fuel
	60.44b(k)			maximum heat	9-7-504		
				capacity per			
				consecutive 12-month			
				period (eq. to 141,197			
				MMbtu/yr)			

¹ Ground Level Concentration

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-C
Applicable Limits and Compliance Monitoring Requirements
S10, Papermaking including pulping, separation processes, web production, and drying

Type of	Citation of	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Total	BAAQMD	Y	Date	15 pounds/day or 300	Citation	N N	Турс
Carbon	8-2-301	1		ppm, dry basis		11	
Emis-	0-2-301			ppini, dry basis			
sions							
Through-	BAAQMD	Y		throughput limit of	BAAQMD	P/M	Records
put	Cond			146,000 tons of	Cond #13344		
	#13344			paperboard in any	Part 2		
	Part 1			consecutive 12 month			
				period			
SO2	BAAQMD	N		GLC ¹ of 0.5 ppm for 3		N	
	9-1-301			min or 0.25 ppm for 60			
				min or 0.05 ppm for 24			
				hours			
	BAAQMD	Y		300 ppm (dry)		N	
	9-1-302						
Opacity	BAAQMD	N		Ringelmann No. 1 for		N	
	6- <u>1-</u> 301			less than 3 min/hr			
	BAAQMD	Y		0.15 grain/dscf		N	
	6- <u>1-</u> 310.3			@ 6% O2			

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII - D
Applicable Limits and Compliance Monitoring Requirements S11, S12, S13, COLD CLEANERS

			Future		Monitoring	Monitoring	
Type of	Citation of	FE	Effective		Requirement	Frequency	Monitoring
Limit	Limit	Y/N	Date	Limit	Citation	(P/C/N)	Type
VOC	BAAQMD	Y		Usage < 20 gal/year at each	BAAQMD	P/M	Record-
	Cond#			source	Cond# 16714,		keeping
	16714, part				part 3		
	1						

			Future		Monitoring	Monitoring	
Type of	Citation of	FE	Effective		Requirement	Frequency	Monitoring
Limit	Limit	Y/N	Date	Limit	Citation	(P/C/N)	Type
Opacity	BAAQMD	N		Ringelmann 2.0 for less		N	
	Regulation			than 3 minutes in any hour			
	6-1-303						
	SIP	N		Ringelmann 2.0 for less		N	
	Regulation			than 3 minutes in any hour			
	6-1-303						
FP	BAAQMD	N		0.15 grain/dscf		N	
	Regulation						
	6-1-310						
	SIP	Y		0.15 grain/dscf		N	
	Regulation						
	6-310						

Type of	Citation of	FE	Future Effective		Monitoring Requirement	Monitoring Frequency	Monitoring
Limit	Limit	Y/N	Date	Limit	Citation	(P/C/N)	Type
SO2	BAAQMD	N		ground level		N	
	Regulation			concentrations: 0.5 ppm for			
	9-1-301			3 consecutive minutes, 0.25			
				ppm averaged over 60			
				consecutive minutes, 0.05			
				ppm averaged over 24			
				hours			
SO2	BAAQMD	Y		0.5% sulfur limit for liquid		N	
	Regulation			fuel			
	9-1-304						
Hours of	BAAQMD	N		34 hours/yr for reliability	BAAQMD	С	Non-
operation	Condition			and maintenance	Condition		resettable
	#22851,				#22851, part		totalizing
	part 1				3		meter

			Future		Monitoring	Monitoring	
Type of	Citation of	FE	Effective		Requirement	Frequency	Monitoring
Limit	Limit	Y/N	Date	Limit	Citation	(P/C/N)	Туре
VOC	BAAQMD	Y		5 tons of VOC during any	BAAQMD	P/M	Records
	8-4-302.1			calendar year (Limit applies	8-4-501.1 and		
				to each source)	8-4-501.4		

Table VII - G

Applicable Limits and Compliance Monitoring Requirements S20, Paperboard Sealing (Dry Stack Solution Box)
S21, Paperboard Sealing (Wet Stack Top Solution Box)

S22, Paperboard Sealing (Wet Stack Bottom Solution Box)

S23, Paperboard Coating (#1 Coater)

S24, Paperboard Coating (#2 Coater)

S25, Paperboard Coating (#3 Coater)

			Future		Monitoring	Monitoring	
Type of	Citation of	FE	Effective		Requirement	Frequency	Monitoring
Limit	Limit	Y/N	Date	Limit	Citation	(P/C/N)	Type
VOC	BAAQMD	Y		2.2 lb VOC/gal (applies to	BAAQMD	P/D	records
	8-12-301.1			coatings)	8-12-501.1		
					and		
					8-12-501.2		

VIII. TEST METHODS

The test methods associated with the emission limit of a District regulation are generally found in Section 600 et seq. of the regulation. The following table indicates only the test methods associated with the emission limits referenced in Section VII, Applicable Emission Limits & Compliance Monitoring Requirements, of this permit.

Table VIII

Applicable		
Requireme	Description of Requirement	Acceptable Test Methods
nt		
BAAQMD	Ringelmann No. 1 Limitation	Manual of Procedures, Volume I, Evaluation of Visible
6- <u>1-</u> 301		Emissions
BAAQMD	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulates Sampling
6- <u>1-</u> 310		or
		USEPA Method 5, Determination of Particulate Matter
		Emissions from Stationary Sources
BAAQMD	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulates Sampling
6- <u>1-</u> 310.3		or
		USEPA Method 5, Determination of Particulate Matter
		Emissions from Stationary Sources
BAAQMD	General Operations	Manual of Procedures, Volume IV, ST-15, Particulates Sampling
6-1-311		<u>or</u>
		USEPA Method 5, Determination of Particulate Matter
		Emissions from Stationary Sources
BAAQMD	General Emission Limitation	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide,
9-1-302		Continuous Sampling, or
		ST-19B, Total Sulfur Oxides Integrated Sample
BAAQMD	Fuel Burning (Liquid and Solid	Manual of Procedures, Volume III, Method 10, Determination of
9-1-304	Fuels)	Sulfur in Fuel Oils.
BAAQMD	Performance Standard, NOx,	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen,
9-7-301.1	Gaseous Fuel	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling
BAAQMD	Performance Standard, CO, Gaseous	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide,
9-7-301.2	Fuel	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling
BAAQMD	Performance Standard, NOx, Non-	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen,
9-7-302.1	Gaseous Fuel	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling

VIII Test Methods

Table VIII

Applicable		
Requireme	Description of Requirement	Acceptable Test Methods
nt	-	
BAAQMD	Performance Standard, CO, Non-	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide,
9-7-302.2	Gaseous Fuel	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling
BAAQMD	Natural Gas Curtailment	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen,
9-7-305.1	Performance Standard, NOx	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling
BAAQMD	Natural Gas Curtailment	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide,
9-7-305.2	Performance Standard, CO	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling
BAAQMD	Equipment Testing - Non-Gaseous	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen,
9-7-306.1	Fuel NOx Performance Standard	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling
BAAQMD	Equipment Testing - Non-Gaseous	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide,
9-7-306.2	Fuel CO Performance Standard	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling
BAAQMD	Emission Limits, Turbines over 10	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen,
9-9-301.2	mw w/o SCR (9/21/94)	Continuous Sampling and
		ST-14, Oxygen, Continuous Sampling
NSPS	Standards of Performance for	
Subpart	Stationary Gas Turbines (1/27/82)	
GG		
60.332	Performance Standard, NOx	EPA Method 20, Determination of Nitrogen Oxides, Sulfur
(a)(1)		Dioxide, and Diluent Emissions from Stationary Gas Turbines
60.333 (a)	SO2 Volumetric Emission Limit	EPA Method 20, Determination of Nitrogen Oxides, Sulfur
		Dioxide, and Diluent Emissions from Stationary Gas Turbines
60.333 (b)	Fuel Sulfur Limit (gaseous fuel)	ASTM D 1072-80, Standard Method for Total Sulfur in Fuel
		Gases
		ASTM D 3031-81, Standard Test Method for Total Sulfur in
		Natural Gas by Hydrogenation
		ASTM D 4084-82, Standard Method for Analysis of Hydrogen
ı		Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method),
		ASTM D 3246-81, Standard Method for Sulfur in Petroleum Gas
		by Oxidative Microcoulometry
Permit	NOx Limit	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen,
Condition		Continuous Sampling and
12231 part 7		ST-14, Oxygen, Continuous Sampling

VIII Test Methods

Table VIII

Applicable Requireme	Description of Requirement	Acceptable Test Methods
	NO 1: '	M 1 CD 1 W 1 DV CT 124 O 11 CNI.
Permit	NOx Limit	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen,
Condition		Continuous Sampling and
12231 part 8		ST-14, Oxygen, Continuous Sampling
Permit	CO Limit	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide,
Condition		Continuous Sampling and
12231 part 9		ST-14, Oxygen, Continuous Sampling
Permit	SO2 Limit in distillate oil	ASTM D 2880-71, Standard Specification for Gas Turbine Fuel
Condition		Oils
12231 part		
10		
Permit	Visible particulate emissions	Manual of Procedures, Volume IV, ST-15, Particulate
Condition		
12231 part		
11		
NSPS	Standards of Performance for	
Subpart Db	Industrial-Commercial-	
	Institutional Steam Generating	
	Units (12/16/87)	
40 CFR	Opacity Standard	EPA Method 9
60.43b(f)		

IX. PERMIT SHIELD

A. Non-Applicable Requirements

Pursuant to District Regulations 2-6-233 and 2-6-409.12, the federally enforceable regulations and/or standards cited in the following table[s] are not applicable to the source or group of sources identified at the top of the table[s]. Enforcement actions and litigation may not be initiated against the source or group of sources covered by this shield based on the regulatory and/or statutory provisions cited, as long as the reasons listed below remain valid for the source or group of sources covered by this shield.

Table IX-A S7, Duct Burner

	Title or Description		
Citation	NOx from boilers		
BAAQMD	Nitrogen Oxides And Carbon Monoxide From Industrial, Institutional, and		
Regulation 9, Rule 7	Commercial Boilers, Steam Generators, and Process Heaters		
	Waste heat recovery boilers are exempt per 9-7-110.5		
NSPS, 40 CFR 60,	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which		
Subpart D	Construction is Commenced After August 17, 1971		
	The capacity of S7 is less than 250 MMbtu/hr.		
NSPS, 40 CFR 60,	Standards of Performance for Electric Utility Steam Generating Units for Which		
Subpart Da Construction is Commenced After September 18, 1978			
	The capacity of S7 is less than 250 MMbtu/hr.		
NSPS, 40 CFR 60	Standards of Performance for Industrial-Commercial-Institutional Steam Generating		
Db	Units		
	S7 is less than 100 MMbtu/hr.		
NSPS, 40 CFR 60	Standards of Performance for Small Industrial-Commercial-Institutional Steam		
Subpart Dc	Generating Units		
	S7 was built before 1989.		

IX. Permit Shield

Table IX-B
S10, Papermaking including pulping, separation processes, web production, drying, and coating
All Recycle Paperboard Plant Sources, Felt Cleaning, Sealing & Coating

	Title or Description	
Citation	Standards of Performance	
NSPS 40 CFR 60	No applicable subpart for recycle paperboard plants	

Table IX-C Facility Wide

Citation	Title or Description
BAAQMD	Data, Records and Reporting
Regulation 6-	The APCO has not required the owner/operator to install opacity monitors.
<u>1-</u> 302 and 6- <u>1-</u>	
502	
Regulation 8,	Storage of Organic Liquids
Rule 5	Organic chemicals have a vapor pressure below 25.8 mmHg
NESHAPS, 40	Major source MACT standards
CFR 63	Facility is not a major source of hazardous air pollutants
40 CFR 68	Accidental Release Facility does not store large quantities of materials subject to this standard.
40 CFR	Recordkeeping
82.166(k)	Regulation not applicable to refrigerant units containing 50 lbs or less refrigerant
Federal Clean	Federal regulation applies only to states.
Power Plan, 40	Gas turbine and cogeneration plant, which has never sold 219,000 MWh electricity per
CFR 60,	year, determined by state as not affected unit under state Clean Power Plan.
Subpart	
UUUU,	
Section	
60.5850(d)	

B. Subsumed Requirements

None

X. REVISION HISTORY

Initial Issuance (Application 25822): February 16, 1999 Administrative Amendment (no application): September 28, 2000 Changes in monitoring report dates Administrative Amendments (no application): July 6, 2001 Change to the responsible official and title of contact Deletion of Permit Condition 14522, Parts 2 and 3 because the duct burner no longer burns fuel oil. Merger of Permit Condition 14522, Parts 1 and 7 because both of them require use of natural gas. Addition of standard condition I.11 to conform with Manual of Procedures, Volume 2, Part 3, as amended on May 2, 2001. Changes to standard conditions H.2 and H.3 to with Manual of Procedures, Volume 2, Part 3, as amended on May 2, 2001. Updates of District rule and SIP amendments Changes to the permit shield language in Section X.B to conform to Regulation 2, Rule 6, as amended on May 2, 2001

Renewal (Application 8095):

Deletion of out-dated SIP rules

September 30, 2011

Renewal (Application 28132)

XI. GLOSSARY

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

API

American Petroleum Institute

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

BARCT

Best Available Retrofit Control Technology

Basis

The underlying authority that allows the District to impose requirements.

\mathbf{C}_{4}

An Organic chemical compound with five carbon atoms

$\underline{\mathbf{C_6}}$

An Organic chemical compound with six carbon atoms

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAPCOA

California Air Pollution Control Officers Association

CEC

California Energy Commission

CEM

Continuous Emission Monitor

CEQA

California Environmental Quality Act

XI. Glossary

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO

Carbon Monoxide

CO

Carbon Dioxide

COM

Continuous Opacity Monitor

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

dscf

Dry Standard Cubic Feet

dscm

Dry Standard Cubic Meter

E 6, E 9, E 12

Very large or very small number values are commonly expressed in a form called scientific notation, which consists of a decimal part multiplied by 10 raised to some power. For example, $4.53 ext{ E 6 equals } (4.53) ext{ x } (10^6) = (4.53) ext{ x } (10 ext{ x } 10 ext{ x } 10 ext{ x } 10 ext{ x } 10 ext{ x } 10) = 4,530,000$. Scientific notation is used to express large or small numbers without writing out long strings of zeros.

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District Regulations.

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60, (NSPS), Part 61, (NESHAPs), Part 63 (HAP), and Part 72 (Permits Regulation, Acid Rain), and also including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FP

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

XI. Glossary

FR

Federal Register

grain

1/7000 of a pound

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by both 40 CFR Part 63, and District Regulation 2, Rule 5.

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of any regulated air pollutant, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Act and implemented by District Regulation 2, Rule 6.

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAP

National Emission Standard for Hazardous Air Pollutants as codified in 40 CFR Parts 61 and 63.

NMHC

Non-methane Hydrocarbons

NMOC

Non-methane Organic Compounds (Same as NMHC)

NOx

Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Act, and implemented by both 40 CFR Part 60 and District Regulation 10.

NSR

New Source Review. A federal program for preconstruction review and permitting of new and modified sources of air pollutants for which the District is classified "non-attainment". Mandated by Title I of the Clean Air Act and implemented by 40 CFR Parts 51 and 52 as well as District Regulation

Facility Name: Graphic Packaging International, Inc.

Permit for Facility #: A0732

XI. Glossary

2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

O2

The chemical name for naturally-occurring oxygen gas.

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets at a specified ratio for the emissions from a new or modified source and any pre-existing cumulative increase minus any onsite contemporaneous emission reduction credits. Applies to emissions of POC, NOx, PM10, and SO2.

POC

Precursor Organic Compounds

PM

Total Particulate Matter

PM10

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO₂

Sulfur dioxide

SO_3

Sulfur trioxide

THC

Total Hydrocarbons (NMHC + Methane)

therm

100,000 British Thermal Units

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TOC

Total Organic Compounds (NMOC + Methane, Same as THC)

XI. Glossary

TSP

Total Suspended Particulate

TVP

True Vapor Pressure

VMS

Branched, cyclic, or linear completely methylated siloxane

VOC

Volatile Organic Compounds

Units of Measure:

o or ivicasui	ı c.	
bhp	=	brake-horsepower
Btu	=	British Thermal Unit
$\mathbf{C} =$	degrees	s Celcius
F =	degrees	s Fahrenheit
$\underline{\mathbf{f}^3} =$	cubic fe	<u>eet</u>
g	=	gram
gal	=	<u>gallon</u>
GLC	=	ground level concentration
gpm	=	gallons per minute
gr	=	<u>grain</u>
Hr	=	hour
hp	=	horsepower
lb	=	pound
in	=	inches
$\underline{\mathbf{m}}^2$	=	square meter
max	=	maximum
min	=	minute
M	=	thousand
Mg	=	mega-gram, one thousand grams
μg	=	micro-gram, one millionth of a gram
MM	=	million
mm	=	millimeter
MMbtu	=	million btu
mm Hg	=	millimeters of Mercury (pressure)
MW	=	megawatts
O2	=	diatomaceous oxygen
ppb	=	parts per billion
ppm	=	parts per million
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
S	=	sulfur

XI. Glossary

scfm	=	standard cubic feet per minute
std	=	standard
vol	=	volume
wt	=	weight
yr	=	year

Symbols:

<	=	less than
>	=	greater than
<	=	less than or equal to
>	=	greater than or equal to